

DOCUMENT FOR APPROVAL BY THE BOARD OF LAND AND NATURAL RESOURCES

CONSENT

August 8, 1986

Resubmittal
ASSIGNMENT OF LEASE

RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII (RCUH), a
Hawaii corporation--administration agent for the HGP-A
Development Group, Assignor, to the NATURAL ENERGY
LABORATORY OF HAWAII (NELH), Assignee

Geothermal Resources Mining Lease No. S-4602, dated June 19,
1979 .

STATUTE

Chapter 171-95, Hawaii Revised Statutes

LOCATION

State land and improvements thereon at Kapoho, Puna, Hawaii,
being portion of L. P. 8177 and R. P. 4497, L. C. Aw 8559,
Apana 5 to C. Kanaina; acquired by the State of Hawaii from
Kapoho Land and Development Company, Limited, by Deed dated
May 22, 1978, and recorded at the Bureau of Conveyance on
June 21, 1978, in Liber 12967, page 721 and filed at the
Department of Land and Natural Resources, as Land Office
Deed No. S-26932. The parcel is subject to a 20-foot-wide
access easement in favor of the remainder of L. C. Aw 8559,
Apana 5.

Tax Map Key: 3rd/1-4-01;2

AREA

4.1 acres, more or less, as delineated on map prepared by
Survey Division, Department of Accounting and General
Services and designated C. S. F. No. 18,422 dated
September 15, 1978

IMPROVEMENT

Geothermal Well Facilities

ZONING

SLUC: Agricultural District

County of Hawaii: Agriculture

ITEM F-1-b

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TERM

Primary term of ten years and for so long thereafter as geothermal resources are produced and utilized, provided that the maximum term shall not exceed 35 years

LIABILITY INSURANCE

As required and spelled out under Title 13, Chapter 183, subchapter 35 of the Department of Land and Natural Resources Rules on Leasing and Drilling of Geothermal Resources

REVOCATION AND SURRENDER

Revocation and Surrender as required under Title 13, Chapter 183, subchapter 26 and 27 of the Department of Land and Natural Resources Rules on Leasing and Drilling of Geothermal Resources

ASSIGNMENT AND SUBLEASE

This lease shall not be assigned or sublet; except that with the approval of the Board of Land and Natural Resources; Assignment for security interest purposes only may be made.

REMARKS

Consideration: One Dollar (\$1.00)

During the 1985 State Legislative session, Hawaii Revised Statutes, Act 42 was enacted to permit NELH to establish, manage, and operate additional facilities which are involved in natural energy research, development, demonstration and commercialization.

It was felt that the expertise of the NELH Board of Directors might be expanded to include responsibility for additional facilities. One such facility is the Puna Geothermal Facility located at Kapoho, Puna, Island of Hawaii.

The existing management group, called HGP-A Development Group, was comprised of three members all of whom were also members of the NELH Board.

The HGP-A Development Group agreed that the transfer of their responsibility to NELH was desirable and at the June 27, 1985, NELH Board meeting, the Chairman of NELH was authorized to pursue this transfer and the transfer of the property of the Puna Geothermal Facility which is covered under DLNR Geothermal Resources Mining Lease No. S-4602 from the Research Corporation of the University of Hawaii to the Natural Energy Laboratory of Hawaii.

RECOMMENDATION

That the Board approve the assignment of Geothermal Resources Mining Lease No. S-4602 from the Research

Corporation of the University of Hawaii, Assignor, to The Natural Energy Laboratory of Hawaii, Assignee, subject to existing terms and conditions within Geothermal Resources Mining Lease No. S-4602, such other terms and conditions as may be prescribed by the Chairperson and subject to review and approval by the Office of the Attorney General.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

GEOHERMAL RESOURCES
MINING LEASE NO. S-4602

Between

STATE OF HAWAII

and

THE RESEARCH CORPORATION
OF THE UNIVERSITY OF HAWAII

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
GEOTHERMAL RESOURCES MINING LEASE NO. S-4602

THIS INDENTURE OF LEASE, made this 19th day of June, 1979, pursuant to Section 171-95 and Chapter 182, Hawaii Revised Statutes, and the rules and regulations promulgated under said chapter, by and between the STATE OF HAWAII, by its Board of Land and Natural Resources, hereinafter called the "Lessor", and THE RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII, a public corporation, whose business and post office address is 402 University Building, 1110 University Avenue, Honolulu, Hawaii 96814, hereinafter referred to as the "Lessee",

WITNESSETH:

WHEREAS, the Lessor is concerned with the development of alternate energy sources for the State of Hawaii; and

~~WHEREAS, the Lessor owns certain lands that have geothermal resources thereunder and is desirous of investigating the economic feasibility of the production of such resource; and~~

WHEREAS, Lessee is a body corporate established pursuant to Chapter 307, Hawaii Revised Statutes, and is a public instrumentality and a part of the University of Hawaii for administrative purposes; and

WHEREAS, the purpose for which Lessee is organized is, inter alia, to engage in scientific research and investigation; and

WHEREAS, Lessor is desirous of leasing certain lands to Lessee for the development, operation, utilization and research of geothermal resources; and

WHEREAS, pursuant to Section 171-95, Hawaii Revised Statutes, the State may lease public lands without public auction to government agencies,

NOW, THEREFORE, in consideration of the premises set forth herein,

WITNESSETH:

~~1. GRANT~~

Lessor, for and in consideration of the rents, royalties and all of the terms, covenants and conditions contained herein and in the Addendum attached hereto, to be observed and performed by the Lessee, does hereby grant, lease, let and demise unto Lessee the right to develop geothermal resources and geothermal by-products in and under all of the land described in Exhibit "A" containing approximately 4.1 acres, more or less, situate at Kapoho, Puna, Island of Hawaii, Hawaii, as shown on the map marked Exhibit "B" (hereinafter referred to as the "leased land"), which exhibits are attached and made parts hereof, more specifically for the purposes of and with the sole and exclusive right of:

(a) Taking, removing, transporting, owning, selling, utilizing or otherwise disposing of geothermal resources and geothermal by-products, whether for the production of energy, hydroponic or other commercial uses and purposes incidental thereto;

(b) Injecting or reinjecting into the subsurface of the leased land in accordance with a plan approved by the Lessor for purposes of disposal of effluents, any waste product or other substances of any nature from wells located on the leased land, lands pooled or unitized therewith or on lands in the vicinity thereof, or for the use of permitting secondary recovery, field pressure maintenance, or any other similar or dissimilar purpose necessary or convenient to the Lessee's operations;

(c) Constructing, using, operating and maintaining on the surface of land, and removing therefrom, any and all structures, electric power generating plants, or other facilities and installations, roads, ponds, pipelines, power and telephone transmission lines thereon necessary or convenient to the fulfillment of the purposes hereof. The right of removal, however, shall not be applicable in the event of a revocation as indicated in Rule 3.8 of Regulation 8 on the Leasing of Geothermal Resources and Drilling for Geothermal Resources in Hawaii, but shall be applicable to a surrender under Rule 3.9, except and to the extent of the applicability of Rule 7.10;

(d) The right to conduct geothermal exploration activities pursuant to ~~Rule 3.1~~;

(e) Conducting flow tests to provide more information about the characteristics of the geothermal well identified as HGP-A and geothermal reservoir under the leased land;

(f) Installing a geothermal research facility
which shall include:

(1) a power generation system and
associated equipment; and

(2) a research facility to test electric
and non-electric applications of geothermal
resources;

(g) Operating the power plant and research
facility to be constructed thereon, including the
sale of electricity generated;

(h) Installing, erecting and maintaining
a visitor information center facility;

(i) Installing and operating drain fields
and injection wells, if necessary;

(j) Installing, operating and maintaining
an aquaculture research pond;

(k) Installing, erecting, constructing,
operating and maintaining such other facilities
necessary to conduct research on geothermal resources
and/or geothermal by-products.

Lessee may at its own option either drill on
the leased land or obtain rights on other adjoining or,
adjacent lands in the vicinity of said leased land for
drill sites from which wells can be slant drilled into
said leased land for the purposes of the exercise of all
other rights and privileges hereinabove granted to Lessee
under this Lease.

2. RESERVATIONS TO LESSOR

All rights in the leased land not granted to
the Lessee by this Lease are hereby reserved to the

Lessor. Without limiting the generality of the foregoing, such reserved rights include:

(a) Disposal - The right to sell or otherwise dispose of the surface of the leased land or any other resource in the leased land under existing laws, or laws hereafter enacted, subject to the rights of the Lessee under this Lease;

(b) Rights-of-way - The right to authorize geological and geophysical explorations on the leased land which do not interfere with or endanger present operations or reasonable prospective operations under this Lease, ~~and the right to grant such easements or rights-of-way for joint or several use upon, through or in the leased area for steam lines and other public or private purposes which do not interfere with or endanger present operations or reasonable prospective operations or facilities constructed under this Lease;~~

(c) Certain Mineral Rights - The right to extract at its sole cost and expense and own oil, hydrocarbon gas, and helium from all geothermal steam and associated geothermal resources produced from the leased land; provided, however, that such extraction and ownership rights shall be exercised by Lessor in such manner as not to interfere with the rights of Lessee under this Lease.

(d) Casing - The right to acquire the well and casing when the Lessee finds only potable water, and such water is not required in lease operations; and

(e) Measurements - The right to measure geothermal resources and to sample any production thereof.

3. TERM

A. Primary Term, Extended Term, Maximum Term

~~This Lease shall be for a term of ten (10)~~ years from and after the effective date of this Lease (hereinafter referred to as the "primary term"), and for so long thereafter as geothermal resources are being produced and utilized for research and development purposes, ~~provided that the maximum term of this Lease shall not exceed thirty-five (35) years.~~

B. Extension of Lease Beyond Primary Term

If at the expiration of the primary term hereof Lessee is conducting any of the activities enumerated in paragraph 1 of this Lease, then this Lease shall be continued for so long thereafter as such activities are continued with no cessation thereof for more than 180 days, but not to exceed a period of five years. ~~The~~ Chairman shall continue to review this Lease every five (5) years until the expiration of the term.

4. RENTALS

Lessee shall pay to Lessor the sum of ONE AND NO/100 DOLLAR (\$1.00) as rental on the leased land for and during the term of this Lease.

5. ROYALTIES

Lessor hereby waives the payment of any royalties for and during the term of the Lease; provided,

however, Lessee shall file with Lessor a monthly statement showing the amount of geothermal resources or by-products produced, used, sold or otherwise disposed of and the computation and determination of royalties as if they were to be paid at the rate of ten percent (10%) of the gross amount or value of the geothermal resources and five percent (5%) of the gross amount or value of the geothermal by-products produced under this Lease as measured at the well-head and sold, utilized or otherwise disposed of by Lessee. Monthly statements shall be filed no later than thirty (30) days after the end of each calendar month.

6. GEOTHERMAL RESOURCES METERING

Metering equipment shall be maintained and operated by the Lessee in such a manner as to meet acceptable standards of accuracy consistent with geothermal industry practices. Use of such equipment shall be discontinued at any time upon determination by the Lessor that standards or accuracy or quality are not being maintained and, if found defective, the Lessor will determine the quantity and quality of production from the best evidence available.

7. GEOTHERMAL BY-PRODUCTS TESTING

The Lessee shall furnish the Chairman the results of periodic tests showing the content of by-products in the produced geothermal resources. Such tests shall be taken as specified by the Chairman and by the method of testing approved by him, except that tests not consistent with industry practice shall be conducted at the expense of the Lessor.

8. REQUIREMENT TO COMMENCE MINING OPERATIONS

Lessee shall commence the activities enumerated in paragraph 1 of this Lease upon the leased land within three years from the effective date of this Lease, except as otherwise provided, by special condition 1 contained in the Addendum.

9. TAXES

A. Real Property Taxes

Lessee shall pay any real property taxes levied on that portion of the surface of the leased land utilized by Lessee and on the structures and improvements placed thereon and utilized by Lessee; provided that all sub-surface rights and any geothermal resources underlying the leased land under this Lease shall be deemed to have only nominal value for real property tax assessment purposes until such time, if any, as specifically authorized by law. If Lessor has exercised its rights under paragraph 2 herein, said taxes shall be prorated according to Lessee's interests.

10. UTILITY SERVICES

Lessee shall be responsible for all charges, duties and rates of every description, including water, electricity, sewer, gas, refuse collection or any other charges, arising out of or in connection with Lessee's mining for geothermal resources hereunder.

11. SANITATION

Lessee shall keep its operations and improvements in a strictly clean, sanitary and orderly condition.

12. WASTE

Lessee shall not commit, suffer or permit to be committed any waste, nuisance, strip mining or unlawful use of the leased land or any part thereof.

~~13.~~ COMPLIANCE WITH LAWS

Lessee shall comply with all of the requirements of all municipal, state and federal authorities and observe all municipal, state and federal laws and regulations pertaining to the leased land, now in force or which may hereafter be in force, including, but not limited to, all water and air pollution control laws, and those relating to the environment; provided, further, that the State of Hawaii, acting in its governmental capacity, may by such regulations or amendments thereto made at any time, regulate the drilling, location, spacing, testing, completion, production, operation, maintenance and abandonment of a well or wells or similar activity as well as the construction, operation and maintenance of any power plant or other facilities in the exercise of its police powers to protect the public health, welfare and safety as provided in the regulations.

14. INSPECTION OF THE LEASED LAND

Lessee will permit the Lessor and its agents, at all reasonable times during the said term, to enter the demised premises without advance notice to inspect and examine the operations of and improvements made by Lessee for compliance with the terms and conditions of this Lease and all applicable laws and regulations.

15. REPAIRS TO IMPROVEMENTS

Lessee shall, at its own expense, keep, repair and maintain all buildings and improvements constructed or installed on the demised premises for its geothermal mining operations in good order, condition and repair, reasonable wear and tear excepted.

~~16. LIENS~~

Lessee will not commit or suffer any act or neglect whereby the estate of the Lessor in the demised premises shall become subject to any attachment, lien, charge or encumbrance whatsoever, and shall indemnify and hold harmless the Lessor against all such attachments, liens, charges and encumbrances and all expenses resulting from any such act or neglect on the part of the Lessee.

~~17. ASSIGNMENT OR SUBLEASE~~

Lessee shall not transfer this Lease to any person qualified under the applicable law and regulations by assignment, sublease, or other transfer of any nature including the creation of security interests in Lessee's interest in this Lease and Lessee's rights hereunder, in whole or in part, and as to all or a part of the leased land, without the prior approval of the Lessor.

18. INDEMNITY

The Lessee agrees to hold harmless and indemnify Lessor, State of Hawaii and its divisions, departments, agencies, officers, agents and employees, together with the lessee of the surface rights of the leased land, if

any, from any and all liabilities and claims for damages and/or suits for or by reason of death or injury to any person or damage to property of any kind whatsoever, whether the person or property of Lessee, his agents, employees, contractors, or invitees, or third persons, from any cause or causes whatsoever caused by any occupancy, use, operation or any other activity on the leased land or its approaches, carried on by the Lessee, his agents, employees, contractors, or invitees, in connection therewith; and the Lessee agrees to indemnify and save harmless the State of Hawaii, the Board, the Chairman, the Department, or lessee of surface rights if there be one, and their officers, agents, and employees from all liabilities, charges, expenses (including counsel fees) and costs on account of or by reason of any such death or injury, damage, liabilities, claims, suits or losses.

19. LIABILITY INSURANCE

The Lessee or transferee shall obtain, at its own cost and expense, and maintain in force during the entire term of this Lease, a policy or policies of comprehensive general public liability and property damage insurance from any company licensed to do business in the State of Hawaii covering liability for injuries to persons, wrongful death, and damages to property caused by any occupancy, use, operations or any other activity on leased lands carried on by Lessee or transferee, its agents or contractors in connection therewith, in the following minimum amounts:

a. Comprehensive General Bodily Injury
Liability - \$300,000.00 each occurrence, \$1,000,000.00
aggregate.

b. Comprehensive General Property Damage -
\$50,000.00 each occurrence, \$100,000.00 aggregate.

Liability coverage for injury or damage to persons or property caused by explosion, collapse and underground hazards are to be included prior to initiation of operations to drill a well for geothermal discovery, evaluation or production. Lessee shall evidence such additional coverage to the Chairman prior to initiation of drilling operations. The State of Hawaii, the Hawaii State Board of Land and Natural Resources, the Chairman of the Board of Land and Natural Resources, and the Department of Land and Natural Resources, shall also be named insureds.

No cancellation provision in any insurance policy shall release the Lessee of the duty to furnish insurance during the term of this Lease. A signed and complete certificate of insurance, containing the special endorsement prescribed in the regulations and indicating the coverage required by this paragraph, shall be submitted to the Chairman prior to entry upon the leased land. At least thirty (30) days prior to the expiration of any such policy, a signed and complete certificate of insurance, indicating the coverage required by this paragraph, showing that such insurance coverage has been renewed or extended, shall be filed with the Chairman.

20. BOND REQUIREMENTS

J. N.P.
11/11

The Lessee and every assignee, sublessee or transferee hereof shall file with the Board, a bond in the amount of \$10,000.00 in a form approved by the Board and made payable to the State of Hawaii, conditioned upon faithful performance of all requirements of Chapter 182, Hawaii Revised Statutes, the regulations thereunder and of this Lease, and also conditioned upon full payment by the Lessee of all damages suffered by the occupiers of the leased land for which Lessee is legally liable. If the Lessee holds more than one (1) geothermal lease from the State of Hawaii, it may file with the Board, in lieu of separate bonds for each lease, a blanket bond in the amount of \$50,000.00.

~~21. REVOCAATION~~

This Lease may be revoked by the Board if the Lessee fails to pay the rental or fails to comply with any of the other terms of the Lease, laws, or regulations, or if the Lessee wholly ceases all activities for a period of one year without the written consent of the Board for reasons other than force majeure. The Board shall give the Lessee written notice of the claimed default and an opportunity to be heard within thirty (30) days of such notice. The Lessee shall be allowed sixty (60) days to correct such default or, if the default is one that cannot be corrected within sixty (60) days to commence in good faith and thereafter proceed diligently to correct such default, following written notice of a determination after hearing by the Board that such default exists. Failure

to comply with the foregoing shall be deemed sufficient cause for revocation. Defaults arising because of failure to pay rents and/or royalties when due must be cured within sixty (60) days of a written notice of default; otherwise the Lease may be revoked. In the alternative, the Lessee may surrender the Lease as hereinafter provided.

Upon the revocation of a geothermal mining Lease, Lessor shall have the right to retain the improvements or require the Lessee to remove the same and restore the premises to a similar condition prior to any development or improvements, to the extent reasonably possible and, upon failure by the Lessee to do so, the Lessor may recover the cost thereof, in addition to imposing any penalties as provided by law or regulations.

22. SURRENDER

If Lessee has complied fully with all the terms, covenants and conditions of this Lease and the Regulations, Lessee may surrender, at any time and from time to time, this Lease in its entirety or with respect to any portion of the land described in this Lease. For the purposes hereof, if there are no deficiencies with respect to the land to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment, Lessee will be deemed to have complied fully with all of the terms, covenants and conditions of this Lease and the Regulations. No deficiencies shall be deemed to exist unless, within sixty (60) days of the delivery of the document of surrender, the Lessor has notified the Lessee in writing of any deficiency claimed to exist. If

there are no deficiencies as aforesaid, such surrender shall be effective as of the delivery to Lessor of the document of surrender executed by Lessee describing the Lease or that portion of the land described in the Lease which is to be surrendered. If there are claimed deficiencies with respect to the land to be surrendered pertaining to public health, safety, conservation of resources and preservation of the environment at the time of delivery of the document, such surrender shall not become fully effective until such time as such deficiencies have been corrected or determined not to exist. However, provided that if Lessee corrects such deficiencies within sixty (60) days of notification thereof, or if the deficiencies cannot be corrected within sixty (60) days, commences in good faith and thereafter proceeds diligently to correct such deficiencies, then, in such case, although the surrender shall not be fully effective upon delivery of the document of surrender, the Lessee shall be relieved of any other or further obligations and liability as to the Lease or as to any portion of the land described in the Lease which has been submitted for surrender, whether such liabilities or duties arise out of this Lease or the Regulations, including, without limiting the generality of the foregoing, all obligations to pay rent, or to be diligent in exploration or development of geothermal resources. During the notification and correction periods above described, this Lease shall not be subject to revocation by the Lessor except for a failure by the Lessee after notification to correct such deficiencies within the time period and in the manner hereinabove described or a breach of the Lease terms as

to any of the remaining demised lands or rights retained by the Lessee; provided, however, that should Lessee contest the validity of any claimed deficiency, the Lessee's obligation to correct shall be suspended pending appeal to and determination by a court of final jurisdiction. Except as aforesaid, nothing herein contained shall constitute a waiver of any liability or duty the Lessee may have with respect to the land or Lease surrendered as a result of any activity conducted on the land or under the Lease prior to such surrender. Upon the surrender of this Lease as to all or any portion of the land covered thereby, or upon any other termination of this Lease except by revocation, the Lessee shall be entitled to all equipment, buildings, and plants placed in and on the land and the Lessor may require the Lessee to remove the same and restore the premises to a similar condition prior to any development or improvements, to the extent reasonably possible. This Lease may also be surrendered if as a result of a final determination by a court of competent jurisdiction, the Lessee is found to have acquired no rights in or to the minerals on reserved lands, nor the right to exploit the same, pursuant to the Lease, and, in such event, the Lessee shall be reimbursed for rentals, royalties and payments paid to the Lessor pursuant to this Lease.

23. ACCEPTANCE OF RENT NOT A WAIVER

The acceptance of rent by the Lessor shall not be deemed a waiver of any breach by the Lessee of any

term, covenant or condition of this Lease, nor of the Lessor's right to give notice of default and to institute proceedings to cancel this Lease in the manner set out in the preceding paragraph, and the failure of the Lessor to insist upon strict performance of any such term, covenant, or condition, or to exercise any option conferred, in any one or more instances, shall not be construed as a waiver or relinquishment of any such term, covenant, condition or option.

24. EXTENSION OF TIME OF PERFORMANCE

Notwithstanding any provision contained herein to the contrary, wherever applicable, the Lessor may for good cause as determined by the Board, allow additional time beyond the time or times specified herein to the Lessee, in which to comply, observe and perform any of the terms, conditions and covenants contained herein.

~~25. WARRANTY OF TITLE~~

The Lessor does not warrant title to the leased land or the geothermal resources and geothermal by-products which may be discovered thereon; the Lease is issued only under such title as the State of Hawaii may have as of the effective date of the Lease or may thereafter acquire. If the interest owned by the State in the leased land includes less than the entire interest in the geothermal resources and geothermal by-products, for which royalty is payable as determined by the courts or otherwise, then the bonus, rentals, royalties and other monetary considerations paid or provided for herein shall be paid to the

Lessor only in the proportion which its interest bears to said whole for which royalty is payable, and the State shall be liable to such persons for any prior payments made as adjudged by the courts or otherwise; provided, however, that the State shall not be liable for any damages sustained by the Lessee.

26. COMMINGLING

Lessee shall have the right, at its election prior to sale, to commingle geothermal resources produced from the leased land with that produced from other Leases held by him or by other Lessees as specified in the Lessee's approved plan of operation for the Lease. However, before there shall be such a commingling of geothermal resources production, the Lessee shall determine the quantities and value of such production upon which royalties are due under the Lease and agrees that in making such determinations, all measurements and samples shall be made and taken in accordance with good geothermal industry practices.

27. SUSPENSION OF OPERATIONS

In the event of any disaster or pollution, or likelihood of either, having or capable of having a detrimental effect on public health, safety, welfare, or the environment caused in any manner or resulting from operations under this Lease, the Lessee shall suspend any testing, drilling and production operations, except those which are corrective or mitigative, and immediately and promptly notify the Chairman. Such drilling and production operations shall not be resumed until adequate corrective measures have been taken and authorization for resumption of operations has been made by the Chairman.

28. DILIGENT OPERATIONS REQUIRED

The Lessee shall be diligent in the exploration and development of the geothermal resources on the leased land. Failure to perform diligent operations may subject the Lease to termination by the Board. Diligent operations mean exploratory or development operations on the leased land including, without limitation, geothermal surveys, heat flow measurements, core drillings, or the drilling of a well for discovery, evaluation, or production of geothermal resources.

29. RECORDS AND REPORTS

A. Lessee shall at all times maintain full and accurate records of production and payments relating to Lessee's operations and activities upon and in connection with said leased land. All books and records of Lessee pertaining to or necessary in determining royalty payments shall be open for inspection at all reasonable times to the authorized representatives of the Lessor.

B. The Lessee shall furnish to the Lessor for its confidential use, copies of all physical and factual exploration results, logs and surveys which may be conducted, well test data, and other data resulting from operations under the Lease. Such information shall be kept confidential as a trade secret for a period of one year from date of receipt, or longer at the discretion of the Lessor.

30. FORCE MAJEURE

If the Lessee is rendered unable wholly or in part by force majeure to carry out its obligations under this Lease, Lessee shall give to Lessor prompt written notice of the force majeure. Thereupon, any obligations

of the Lessee to perform so far as they are affected by the force majeure shall be suspended during the continuance of the force majeure and the primary term of any continuation period shall be extended for a period equal to the period of suspended performance caused by the force majeure. Lessee shall use all possible diligence to remove or correct the force majeure, but this shall not require the settlement of strikes, lockouts or other labor difficulties. In no event shall any extension affect the thirty-five (35) year maximum term of this Lease.

31. UNIT OR COOPERATIVE PLANS

The Lessee may, with the written consent of the Board, unitize the leased land or portions thereof under a unit, cooperative or other plan of development or operation with other state, federal or privately owned lands for the drilling and production of one or more wells in accordance with Rule 3.15 of the Regulations.

32. NOTICES

Pursuant to Rule 8.2 of the Regulations, Lessor may give any notice or deliver any document hereunder to Lessee by mailing the same by registered mail addressed to Lessee at 402 Varsity Building, 1110 University Avenue, Honolulu, Hawaii 96814, or by delivering the same in person to any officer of Lessee. Lessee may give any notice or deliver any document hereunder to Lessor by mailing the same by registered mail addressed to Lessor at the Department of Land and Natural Resources, 1151 Punchbowl Street, Honolulu, Hawaii 96813, or by delivering the same

to Lessor in person. For the purposes of this paragraph, either party may change its address by written notice to the other. In case of any notice or document delivered by registered mail, the same shall be deemed delivered when deposited in any United States post office, properly addressed as herein provided, with postage fully prepaid.

33. QUIET ENJOYMENT

The Lessor hereby covenants and agrees with the Lessee that upon payment of said rents and royalties at the times and in the manner aforesaid and the observance and performance of the covenants, terms and conditions hereof on the part of the Lessee to be observed and performed, the Lessee shall and may have, hold, possess and enjoy the demised subsurface premises for the term hereby demised, without hindrance or interruption by the Lessor or any other person or persons lawfully claiming by, through or under it, subject to the provisions of paragraph 25 and any other provisions of the Lease.

34. RESTORATION OF LEASED LAND

Upon the revocation, surrender or expiration of this Lease, the Lessor may require the Lessee to restore the lands covered herein to its original condition insofar as it is reasonable to do so within ninety (90) days thereof, except for such roads, excavations, alterations or other improvements which may be designated for retention by the Lessor or its agency having jurisdiction over said lands. When determined by the Lessor

or such State agency, cleared sites and roadways shall be replanted with grass, shrubs or trees by the Lessee.

35. COVENANT AGAINST DISCRIMINATION

The use and enjoyment of the leased land shall not be in support of any policy which discriminates against anyone based upon race, creed, color, national origin or a physical handicap.

36. COSTS OF LITIGATION

That in case the Lessor shall, without any fault on its part, be made a party to any litigation commenced by or against the Lessee (other than condemnation proceedings), the Lessee shall and will pay all costs and expenses incurred by or imposed on the Lessor; furthermore, the Lessee shall and will pay all costs and expenses which may be incurred by or paid by the Lessor in enforcing the covenants and agreements of this Lease, in recovering possession of the demised premises or in the collection of delinquent rental, taxes and any and all other charges.

37. HEADINGS

The paragraph headings throughout this Lease are for the convenience of the Lessor and the Lessee and are not intended to construe the intent or meaning of any of the provisions thereof.

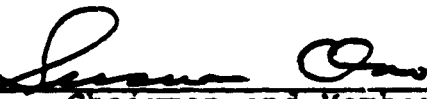
38. REFERENCE

Unless specifically indicated otherwise, the regulation referred to in and governing this Lease shall be Regulation No. 8 relating to Regulation on Leasing of Geothermal Resources and Drilling for Geothermal

Resources in Hawaii approved and adopted by the Board on March 10, 1978, and all terms used herein shall be given the meaning set out in Rule 1.5 of said Regulation 8.

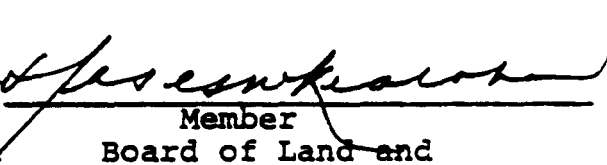
IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed as of the day and year first above written.

STATE OF HAWAII


By 
Chairman and Member
Board of Land and
Natural Resources

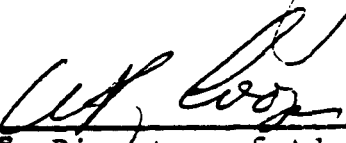
APPROVED BY THE BOARD OF
LAND AND NATURAL RESOURCES
AT ITS MEETING HELD ON

October 13, 1978
or

And By 
Member
Board of Land and
Natural Resources

THE RESEARCH CORPORATION OF
THE UNIVERSITY OF HAWAII

By 
Its Executive Director

By 
Its Director of Administration

APPROVED AS TO FORM:


Deputy Attorney General
MAR 14 1979

STATE OF HAWAII

)

1 SS.

CITY AND COUNTY OF HONOLULU)

On this 15th day of MAY, 1979,

before me appeared EDWARD K. C. LEE and

William Coups, to me personally known,

who, being by me duly sworn, did say that they are the

EXECUTIVE DIRECTOR and DIRECTOR OF ADMINISTRATION
respectively, of RESEARCH CORPORATION, and

that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and the said

Richard K-C Lee and William Lee

acknowledged said instrument to be the free act and deed of
said corporation.

Notary Public, State of
Hawaii

My commission expires: 6/23/81

ADDENDUM

SPECIAL CONDITIONS

1. Construction of the proposed geothermal research facility under paragraph 1(f)(2), shall commence within one (1) year from the effective date of receipt of final subdivision plan approval and be completed within three (3) years thereafter.

2. A landscaping buffer or screening zone shall be provided along the main highway fronting the leased land. The landscaping plans shall be submitted to the County of Hawaii, Planning Department, for review and approval at the time of subdivision plan approval.

3. The requirements of the County of Hawaii Grading Ordinance shall be complied with.

4. Should any unanticipated archaeological or historical sites be found on the leased land, Lessee shall immediately notify the County of Hawaii, Planning Department, and cease operation until a clearance to recommence work is given by the Department.

5. A maximum of two (2) accesses shall be permitted from the main highway. Said accesses shall be approved by the Chief Engineer, County of Hawaii, Department of Public Works.



STATE OF HAWAII

SURVEY DIVISION

DEPT. OF ACCOUNTING AND GENERAL SERVICES
HONOLULU

C.S.F. No. 18,422

September 15, 1978

HAWAII GEOTHERMAL RESEARCH STATION

Kapoho, Puna, Island of Hawaii, Hawaii

Being portion of L.P. 8177 and R.P. 4497, L.C.
Award 8559, Apana 5 to C. Kanaina conveyed to
the State of Hawaii by Kapoho Land and Development
Co., Ltd. by deed dated May 22, 1978 and recorded
in Liber 12967, Page 721 (Land Office Deed S-26932).

Beginning at the south corner of this parcel of land, the
west corner of Lot 1, Lanipuna Gardens, Increment 1 (File Plan 1340)
and on the north side of Pohoiki Road, the coordinates of said point
of beginning referred to Government Survey Triangulation Station
"KALIU" being 7085.68 feet North and 8986.84 feet East, thence running
by azimuths measured clockwise from True South:-

1. 105° 10' 198.02 feet along the north side of Pohoiki Road;
2. Thence along the north side of Pohoiki Road on a curve to the right
with a radius of 265.00 feet, the
chord azimuth and distance being:
132° 37' 244.32 feet;
3. 160° 04' 27.15 feet along the easterly side of Pohoiki Road;
4. 253° 10' 610.52 feet along the remainder of L.P. 8177 and
R.P. 4497, L.C. Award 8559, Apana 5
to C. Kanaina;
5. 343° 10' 342.45 feet along the remainder of L.P. 8177 and
R.P. 4497, L.C. Award 8559, Apana 5
to C. Kanaina;
6. 73° 10' 316.93 feet along Lot 1, Lanipuna Gardens Increment
1 (File Plan 1340) to the point of be-
ginning and containing an AREA OF 4.100
ACRES.

September 15, 1978

Subject, however, to a 20-ft. Road Easement over and across the above-described parcel of land, as shown on plan attached hereto and made a part hereof and more particularly described as follows:

Beginning at the south corner of this easement, being also the initial point of the above-described parcel of land, thence running by azimuths measured clockwise from True South:-

1. 105° 10' 37.74 feet along the north side of Pohoiki Road;
2. 253° 10' 348.94 feet;
3. 343° 10' 20.00 feet along the remainder of L.P. 8177 and R.P. 4497, L.C. Award 8559, Apana 5 to C. Kanaina;
4. 73° 10' 316.93 feet along Lot 1, Lanipuna Gardens, Increment 1 (File Plan 1340) to the point of beginning and containing an AREA OF 0.153 ACRE.

SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
STATE OF HAWAII

By: Ichiro Sakamoto
Ichiro Sakamoto
Land Surveyor

Compiled from field survey
by R. Kuba & Govt. Survey
Records.

gm

